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THE

MEDICAL AND SURGICAL REPORTER.

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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

TREATMENT OF CHRONIC SUPPURATIONS OF THE EAR.*

Par E. Follin, Professeur agrégé à la Faculté de Médecine, et Simon Duplay, Professeur agrégé à la Faculté de Médecine, Chirurgien des Hôpitaux, Paris.

TRANSLATED BY LAURENCE TURNBULL, M. D.,
Of Philadelphia.

The chronic suppurations of the ear being almost always connected with a constitutional state, the general treatment is of great importance.

I refer the reader to what I have already said on this subject of the treatment of external chronic otitis, and of chronic myringitis. The local treatment consists, first, to prevent the stagnation and deterioration of the pus in the bottom of the ear; second, to modify the condition of the diseased parts, and lastly, to try to obtain the cicatrization of the membrana tympani, or, if this be impossible, the suppression of the purulent discharge. The stagnation and decomposition of pus may be prevented by making frequent injections with tepid water, with a light astringent liquid, or even disinfectant, if the odor is very noticeable.

There should be no fear of passing a quart of tepid water three or four times a day; nor to act with a certain force, employing a large syringe or a powerful irrigator. Here, as elsewhere, skill is preferable to violence, and when these injections are made conveniently, it is useless to employ force.

It is of consequence to straighten com-

pletely the auditory canal by forcibly drawing the external ear above and behind, then the extremity of the tube of the syringe, or of the irrigator, being introduced in the auditory meatus, can be directed towards the posterior partition of the canal, in such a manner that the jet of the liquid does not directly strike the labyrinthine partition, and cause vertigo, syncope, and vomitings.

Why I insist on these details is that the auricular injections are very badly given.

It has happened to me several times to modify and very rapidly cure suppurations in a long-standing case, by the help of the same injections that invalids employ without success from the beginning of their discharge. It has sufficed to show them the manner of practicing these injections. After each washing, medicated applications should be used to modify the diseased parts. The agents employed are extremely variable; they are astringents or light caustics. Sulphate of zinc and copper, alum, tannin, subacetate of lead, and nitrate of silver are equally employed with success. However, each of these agents are indicated more particularly following the case. In simple otorrhoea, without granulations, alum (from 2 to 6 grs. for 100 of water) seems to me, above all, to succeed. In fungous otitis, sulphate of copper (from 1 to 2 grs. for 100) and nitrate of silver are sometimes more advantageous.

In a general manner it can be said, that in cases where the disease is difficult to treat, the nature of the agents employed for application may be changed. I have found successful, when every means seemed definitely without effect, the introducing in the bottom of the canal a plug of wadding saturated

* *Traité Élémentaire de Pathologie Externe.*
Chapitre IV, p. 147, 1873.

with a solution of equal parts of tannin and alcohol, which I allow to remain for twenty-four hours, and which I renew every four or five days. These means, which should be employed only in suppurative chronic otitis, exempt from pain.

It is equally necessary to take certain indispensable precautions for these medicated applications to produce a desirable effect. The patient should bend the head from the opposite side while the liquid is placed in the ear; then, after the latter has penetrated through the perforation of the tympanum, and comes in contact with all the parts of the cavity, the patient should use Valsalva's experiment until the air has traversed the tube, when the liquid penetrates, bathes all the cavity, and introduces itself skillfully in the tube passing through the pharynx.

Some physicians (aurists) commend the insufflation of powders in the treatment of chronic suppurations of the ear. Tale, sub-nitrate of bismuth, alum, sulphate of copper, have been employed, but these powders have the inconvenience of forming with the pus solid masses that are difficult to detach. In certain cases of fungous and granular otitis, it is, however, sometimes useful, having given relief. Good results may be better obtained by directly touching the diseased portions (previously illuminating them by the speculum), either with a small pencil of nitrate of silver, or with a brush saturated with a solution of nitrate of silver, chloride of zinc, subacetate of lead, or perchloride of iron.

At different times, physicians attributing functional troubles which accompany purulent chronic catarrh, caused by the persistence of the perforations of the membrana tympani, have sought to remedy it by obtaining an artificial covering. The first attempts shown were by Marcus Bauzer, 1840, and by Leschevin, 1763; but it is principally since the publications of Yearsley* and of Toynbee that the utility of the artificial tympanum has been recognized.

The first advised the use of a little ball of moistened cotton applied on the perforation of the tympanum, whilst Toynbee devised a genuine artificial membrane composed of a thin layer of vulcanized India rubber, in the centre of which is placed a small silver thread, which facilitates the application and extraction of it. The pressure of this hard metallic thread in the canal is not free from

inconvenience; it can be replaced by a small tube of India rubber, from two to three millimetres in diameter, adherent to the round disc.

THE PROGRESS OF ELECTRICITY IN SURGERY AND MEDICINE, WITH RECENT RESEARCHES.

Read before the Medical and Surgical Society of Baltimore, October 16th, 1873.

BY JNO. J. CALDWELL, M. D.

From the time of Volta and Galvani, and the learned student Torracheila, up to the experiments by those great philosophers, Humphrey Davy, Oersted and Franklin, or, indeed, if we go back to the ancients, with their electric baths, we find this wonderful agent, electricity, used in the healing art.

It was much in vogue in the treatment of various diseases, even so early as in the past half century, when, from the cumbersome and unreliable character of the batteries, instruments, etc., then in use, as well as the then imperfect knowledge of the nervous functions, this valuable agent fell into the hands of charlatanism and itinerant quackery. Indeed, at this period, the whole scientific effort of the savans in this direction seemed to be the application of the electric current to the annihilation of time and space, which has resulted in the present triumphs of Telegraphy.

Hence, we see that electro-physics and electro-dynamics were greatly developed, at the expense of electro-medicine and surgery. Thus it remained until the learned Marshall Hall, Claude Bernard, Duchenne, and Brown-Sequard stepped forward to our rescue, and gave us such results of their scientific investigations in regard to this important agent (so closely allied to the vital forces) as to enable us to exhibit it with some degree of success and certainty in diseased conditions, so that now many of the most eminent of our profession, at home and abroad, are devoting their talents and attention to its therapeutical indications.

As the result of our own practice and experience we may state that the successful application of electricity is, in no case, more strikingly manifest than in the removal of morbid growths by the electro-cautery, especially those of a soft and bleeding character, found in the rectum, vagina and other passages, and, indeed, in any part of the body where the use of the knife is impracticable.

* *The Lancet*, July 1st, 1843.

This force, when applied to electro-puncture in the treatment of aneurisms, has not been so successful in our experience, though Cliniselli, in the *Medical Press and Circular*, of London, reports many cases of success by this mode, and gives full and particular instructions as to the use of the needles and the necessary apparatus. The same force, modified in the treatment of ulcers, is termed electrolysis; the mode of application is to moisten porous paper or linen, cloth, etc., with a solution of the mineral or earthy styptic salts, applying it immediately to the ulcer, then placing the positive pole, in the shape of a zinc electrode, to this covering, passing the negative pole gently around the ulcer, we have an electro-chemical action brought about which deposits the mineral particles upon the morbid surfaces.

The exhibition of this current should be maintained at each sitting for ten or fifteen minutes, and should be made daily. Indolent ulcers, of long standing, have yielded kindly to this process after the failure of almost every other means. A signal advantage of this mode is its lessening of the sensibility of the diseased tissue.

In a late and able paper, my esteemed friend, Alexander Murray, M. D., L.R.C.S., Edin, etc., also a member of the Electro-Therapeutical Society, of New York, who has had large experience in this process, says: "I prefer, however, to use the diluted mineral acids, on account of their stringent and chemical properties. I cover the bottom of the ulcer with a little lymph, cotton wool or granulated sponge; then wet the sponge with whatever agent the nature of the disease may require, and apply the metal disc directly to the saturated material; while I keep one electrode stationary for a few moments, in the ulcer, I work the second conductor slowly around the diseased part; thus I have the nascent chlorine, oxygen, etc., directly eliminated and applied to the parts."

His paper is replete with cases and results, and is well worthy the observation of the surgeon.

Further on the Doctor says, in reference to indolent ulcers, that the flabby, livid-colored granulations, which are usually found in them, after one or two applications of galvanism, are soon changed to a healthy flesh or rose color.

He denominates this method of treatment Galvano-ozonization.

Dr. Murray eulogizes this mode of treatment, and remarks that he finds no reference whatever regarding its use, or mode of application, in any work on electro-therapeutics which he has consulted; whereas, in an article entitled "Electro-chemical Action on Cell-tissues," read before the Electro-Therapeutical Society, of New York, and published in the *New York Medical Journal*, we introduced and particularly dwelt upon this mode of treatment in malignant growths and ulcers, and termed it electrolysis.

We presented to the Society a phial of tissue electrolyzed into fluid extract (beef cell-tissue), at the time of reading the aforementioned paper, the specimen still retaining its original freshness and condition, probably attributable to its being charged with free chlorine. This mode of treatment we regard with great consideration, because we think it clearly points to a new era in the treatment of morbid growth.

Through this mode we have been successful in dissipating schirrus in its early stages, and other tumors of various characters, ulcers, etc.

Galvanism, in the treatment of parasitic skin diseases, thus far, in our hands, has been quite successful. By its electrolytic force, no doubt, the liquids are coagulated, and the animalculæ disintegrated.

We have also employed it in the treatment of eczema with some good results, but not with that brilliant success claimed by Geo. M. Beard, M. D., of New York. This arduous and original worker in the fields of electro-therapeutics claims to have cured the aforementioned and several other skin troubles by central galvanization alone, without making any application to the diseased surface, and cites many cases, both in private and hospital practice, to verify his statement.

Galvanism, in the treatment of neuralgia of various kinds, is one of our most valuable adjuncts. Of course we must bear in view the origin or cause of the complaint, viz: if malarious, use quinine; if specific, iodine, iodoform, etc.; if neuro-asthenic, cod-liver and the phosphates; if mechanical, the surgeon's interference; but in most of these cases we have one or two conditions of the spinal cord, hyperemia, or *æmia*.

In hyperemic neuralgia, hypodermic in-

jections of ergotine and galvanism; in anemic neuralgia, strychnine and Faradism. In both instances we have nausea and dull pain in the stomach, as the remote demonstrations, as well as pain of the joints, face and other neuralgic regions.

The morbid conditions wherein electro-therapeutical applications are indicated may be briefly summed up, viz: in their efficacy in restoring normal action in partial or general paralysis, or wherever there is great atrophy or an inert muscular action, dependent upon deficient nervous tone or deranged action in the nervous centres; in the subjugation of the violent pain of articular rheumatism; in certain atonic or debilitated conditions of the system, owing to impaired nutrition; in the removal of malignant tumors where surgical interference is entirely out of the question, and especially in the extirpation of soft, morbid growths, etc.; and the effects of electrolysis and galvanism have been successfully demonstrated upon anatomical secretions, excretions and morbid cell developments. In applying electricity to tumors we use electrodes with sponge-tips, saturated with a strong solution of chloride of sodium. We always commence from the border of the tumor and gradually approach the more solid particles; as a result, suppuration and absorption set in and destroy the growth.

In this connection we beg leave to refer to a case which came under our own treatment.

Dr. G., a prominent Catholic clergyman, of Brooklyn, N. Y., who suffered from malignant tumor, involving the right side of the face, neck, trachea, and other vital organs, to such an extent as to be unamenable to surgical treatment. He had consulted prominent members of the profession, without encouragement or success. The growth was rapid and pointed to an early dissolution by suffocation, presenting all the characteristics of schirrus. In June, 1871, he called at our office to consult us concerning his trouble, whereupon we informed him of its serious and threatening nature, and that, in our opinion, little encouragement could be given, save that which might be afforded by the judicious use of electricity. Our mode of treatment in this case was daily application of the galvanic current, from a sixteen cell battery (of G. F. Manf. Co.). This treatment was continued from June 5th to July 7th, twenty-four applications in all,

with great success, the tumor having entirely disappeared, relieving him of all its distressing features.

What might be termed the surgical advantages of the electro-cautery will be illustrated by the following case which came under our observation:—

Mrs. W. F., of Kentucky, had a growth which originated upon her left breast, and which increased in size so rapidly as to produce great constitutional disturbances, by deposits in other parts. Even in her case we were able to afford great relief temporarily, for cropping out from the main growth was a bleeding fungoid, which was so large as to involve the axilla and impinge upon the free movement of the arm; this we removed while the patient was etherized, by the electro-cautery loop; she rallied kindly and did not lose enough blood to stain the clothes about her.

By the electrolytic power we have removed successfully three cases of schirrus during the early stages of development; as yet there has been no return of the disease.

It would be out of place, in a paper of this character, to enumerate all the heterogeneous maladies which electricity, either in one or the other of its three currents, viz: electro-tonic, electrolysis, electro-cautery, has proved serviceable in. The electro-tonic will be found highly useful in modifying irritability of nerves of special sense, whilst galvanism (electrolysis) has been found curative in partial paralysis of the vaso-motor nerves, in troubles of the pneumogastric nerves, such as asthma, dyspepsia, etc., in primary arterial spasms, apoplectic paralysis, in the cases of muscular progressive atrophy, in early stages of progressive locomotor-ataxy, and in neuralgic affection of cerebro-spinal nerves. It was for the removal of dyspnoea that led Dr. Phillips, of England, to try galvanism as a remedy in asthma. By transmitting the current from the nape of the neck to the pit of the stomach, he gave decided relief in every one of twenty-two cases.

Claude Bernard believes that in the human subject diabetes mellitus is due to an over activity of the nerves which stimulate the function of the liver, and considers it possible that, if it were in our power to galvanize the sympathetic nerve, this would be the best possible mode of treating diabetes symptomatically, the function of this nerve

being weakened by the undue activity of its antagonists.

Finally we will mention two cases of progressive locomotor-ataxy in its first stage, as the result of sexual excesses and exposure to cold, successfully treated by the Faradic current, with hypodermic injections of strychnia along the cord; duration of treatment about three months, with an application of the current every other day, of fifteen minutes' seance each; injections two or three times a week. In the first case the young man had lately married, and to the ardor of youth we must ascribe his trouble. In the second, a young English gentleman endured great exposure to cold on a gunning frolic in Virginia, the thermometer ranging about zero, being much below his native climate (England). In both cases the symptoms were much alike, viz: a loss of power of co-ordinating movements; so that they had difficulty in walking, lost their balance frequently, had an uncertain and tottering gait, much like a drunken man, could not walk across the floor with their eyes closed without danger of falling headforemost, suffered from rheumatic pains, sharp pains in limited spots, say thighs, knees, and shin bones; bottom of the feet felt as though covered with thick plasters, with occasional prickings, as with pins and needles; when walking, must watch their legs to prevent staggering or falling; legs thrown forward spasmodically.

HOSPITAL REPORTS.

COLLEGE OF PHYSICIANS AND SURGEONS, N. Y.—CLINIC ON DISEASES OF WOMEN.

BY PROF. T. G. THOMAS.

October 31st, 1873.

GENTLEMEN—Since last clinic Dr. FRANCIS DELAFIELD has furnished me with a report of the microscopical characteristics of the fluid withdrawn from the abdominal tumor by the Aspirator. He says he discovered no formative elements, merely pus corpuscles, blood corpuscles, and compound granular cells.

If Dr. Atlee is correct in his views about the utero-fibroid cell, the tumor was ovarian. But whilst there is any doubt we will do nothing.

Were it fibro-cystic, it might go on for ten years, whereas, if ovarian, the patient would drag out an existence for about three years. My own views on the matter would be to let the tumor alone so long as it remains in the condition it is in at present, but should it show marked signs of increase, I would remove it.

Sub-Serous Fibroid.

Mrs. S., aged 43, married three years, sterile. Has been complaining for the past three years of marked pain in groin and back, increased when walking, also pain over the pubes. Has severe dysmenorrhœa. I show you this case, gentlemen, in which very little can be done in the way of cure, though much may be done to relieve. The diagnosis of a case if incurable is just as important as if curable. You may ask what is the use of it when we can do nothing? Very true, but if we can do no good, it may save us from doing harm.

Vaginal Examination.—The neck is narrow and the os small, but large enough to allow of the passage of a sound to the fundus. On the side of the uterus there is a tumor, sensitive on pressure. If this were a hyperplastic ovary prolapsed, we should expect to find it in Douglas' cul-de-sac, and more sensitive than it is now. It is true, it might be an ovary bound to the side of the uterus. The fact of it being sensitive should not weigh very much in the diagnosis, for a fibrous tumor may become excessively so. I suppose every practitioner is aware how sensitive a fatty tumor may become when subject to pressure, as in the gluteal region. In like manner a fibroid tumor of the uterus may also grow sensitive.

This patient has been under treatment for a long time. She now lives in the country, and when she comes to the city she calls to see me, and in this way I was able to bring her before you to-day. During the last six months she has markedly improved; at that time she was eager for any operation. I advised her to let it alone, and have a pessary applied, which she did, with a very favorable result.

Sub-Mucous Fibroid.

Miss N., aged 28, has been sick for two years with metrorrhagia, but has had no uterine pain. Patient is greatly exsanguinated.

Vaginal Examination.—On passing the finger into the vagina the os is felt high up, and by conjoined manipulation the uterus is enlarged several times its normal size. Placing the patient in Sims' position the sound is found to go up seven and a half inches.

In making the examination I use this whalebone sound armed with a little knob the size of a buckshot, for it has frequently happened that where any force had to be used the sound has penetrated the uterine wall, and strange to say, the cases did not end fatally. This might be utero-gestation, but I would hardly expect it with a metrorrhagia of two years' duration. The whale-

bone sound in entering the uterus curves around the fibroid tumor and gives a greater measurement than there is in reality.

Fibrous tumors of the uterus are of three varieties: *Sub-mucous*, *Sub-serous* and *Mural*. The contractile efforts of the uterus soon drive the infant mural tumor either into or out of the cavity, thus giving us eventually two classes, the *Sub-mucous* and *Sub-serous*. Operations on sub-serous or peritoneal forms are out of the question, but on the other hand we have nothing serious to dread from them, and when the patient has ceased to menstruate, the tumor ceases to enlarge, if not to diminish. Many people have them, yet suffer little or no inconvenience.

Sub-mucous tumors, on the other hand, give rise to more important trouble, but they have this advantage, that they are remediable. There is thus between the two a law of compensation.

The treatment of this case will be the same as the one on which I operated at the Woman's Hospital six days ago, and which I will report from time to time. The cervix is cut in three places, the incision passing up to the internal os; ergot is administered, either by the stomach, or, if she is unable to retain it that way, by the rectum. Ergotine may be used hypodermically, and if so, to one part of ergotine add seven each of water and glycerine, and of this thirty or forty drops may be introduced at a time. By this plan of procedure the contractile fibres of the cervix are completely paralyzed.

I do not use sponge tents; they frequently give us very bad results. Two days ago, that is four days from the time of operation in the Hospital case, I found that I could introduce my finger into the cervix; I am now in no hurry about the case, as I can control bleeding, and wait six weeks or two months, as the case may be. If I find that there is a broad base, I can strip it off from the wall of the uterus, and for this nothing is better than a uterine depressor. It then can be removed by the ecraseur. This is a slow operation but a sure one.

There is another operation, and it is this: slit the capsule and enucleate the tumor. I have already operated on six cases, and in each case successfully. The capsule remains, but it can be removed without difficulty. If this patient will enter hospital I shall try the same treatment as in my last operation, slitting the cervix and giving ergot.

Sterility—Disease of Ovaries.

Mrs. W., aged 36, married nine years, but has had no children. Sterility may be considered a disease in women, as a rule, but not always so, for civilization has so far advanced that women themselves decide whether or not they will bear children. I recollect well when I was a boy, and that has not been very long ago, that families numbered seven, eight, or a dozen children. Now there will be, if any, only one, two, or perhaps three. This, undoubtedly, is going to have a very

disastrous effect upon the nation. There is another cause to mention, and that is impotency on the part of the husband. I recollect an odd coincidence in respect to this subject, in which I operated on two cases of imperforate hymen, and in each case was the sterility due to the husband. But to come back to the case before us, she has been sick for a year with pain in the back and side, and is pale and nervous.

Vaginal Examination.—On examining the uterus it is found normal every way, but posteriorly there are two masses between which the finger passes when it is carried upwards through the rectum.

They are undoubtedly prolapsed ovaries; they are painful to the touch, but not specially so. I think this is merely an enlargement similar in pathological characteristics to enlarged tonsils, and in no way cystic disease. Diseased ovaries produce diseased ova, and in this way cause sterility. Women affected this way are liable to have irregularities in menstruation, but it is not so in this case.

As regards treatment, pessaries are of little or no service. Bromides and Iodines are absolutely inefficacious. Iodine is used to the vagina posteriorly, but under any case the disease is exceedingly obstinate. It has been suggested to remove the ovaries through the vagina, but the dangers resulting therefrom have not been thoroughly tested. In the present case the patient does not suffer enough to demand an operation.

Tumor in Rectum.

Mrs. S., aged 22. Had an abortion three years ago. Has been three years sick. Suffers severely from dysmenorrhœa. Has considerable trouble in moving her bowels.

Vaginal Examination.—On making an examination the uterus was found to be retroverted, and we considered that here was the cause of the trouble in defecation, but on examining more thoroughly, a small tumor was found in the wall of the rectum, which, when opened was found to contain colloid matter.

There is connected with the uterus also a fibrous tumor. Were the retroversion simple the cure would be so also. But if there is a fibrous tumor, a pessary will irritate, and the patient will be unable to wear it. Again, if the vagina is attached low on the cervix, it will not keep in position, but slip over the cervix anteriorly. Again, if there has been false membranes connected with the uterus, never promise the patient a cure, for the pessary here again will cause much irritation, and possibly light up an attack of peritonitis.

It is in these classes of cases the intra-uterine stem is indicated. Chambers says, in the London *Obstetrical Journal*, that he sees no bad effects from this way of treating the uterus. So also some of the German authors report, but my experience has been quite the reverse. If this patient will enter hospital, we will see what can be done for her with the intra-uterine stem.

MEDICAL SOCIETIES.

MEDICAL AND SURGICAL SOCIETY
OF BALTIMORE.

Reported by J. W. P. Bates, M. D.

Tetanus.

BY G. L. WILKINS, M. D.

Two varieties of tetanus are usually described by systematic writers, the idiopathic and the traumatic, but as they are characterized by similar phenomena, differing mainly as to their modes of origination and severity of symptoms, there would be no advantage in considering them separately. The influence of each variety in modifying the fatality and treatment of the disease will be considered hereafter.

Symptoms. One of the first symptoms to make its appearance is a feeling of pain and oppression in the epigastric region. At first this does not attract much attention, but with the advance of the disease it increases in severity. Following this pain, there is uneasiness and a sense of stiffness of the muscles concerned in deglutition, slight at first, but it is not long before swallowing is impeded to a considerable extent. Attending these symptoms there are more or less mental and physical depression, sensations of chilliness and general malaise. This usually constitutes the prodromatic stage, which may last a few hours, or several days, or in rapid cases may be entirely overlooked. In the next stage the epigastric pain continues. It is seated just below the sternum, extending backwards to the spinal column, and is due to spasm of the diaphragm. The difficulty of swallowing increases, then the muscles of the jaws become contracted, rendering it difficult and sometimes impossible to open the mouth. As the muscles of the face become affected, an expression like the *risus sardonius* is produced, from retraction of the angles of the mouth, the elevation of the *alae nasi* and the expansion of the nostrils. At the same time the eyes are staring, the brows corrugated, and the countenance wears an anxious expression. Following these contractions the morbid action extends to the other muscles, from above downwards, until there is rigidity and contraction of the entire muscular system. The spasms characteristic of tetanus are tonic; they are marked by more or less exacerbation, and are accompanied by partial relaxation. Any cause calculated to excite reflex action will induce recurrence of the attack. Thus any sudden contact with the body, noise of any kind, and even a breath of cold air may produce an aggravation of the spasms. They are marked by great pain, and have been known to be so violent as to break the teeth and the bones of the leg, and even to tear the large muscles of the thigh. During the exacerbation extreme contraction of the pupil, followed by partial dilatation in the in-

terval takes place. This point, to which attention was first directed by Todd, I have frequently observed. The frequency of the spasms depends entirely upon the severity of the disease. The tonic rigidity of the muscles of respiration produces difficulty of breathing, and the same result may ensue from spasmodic closure of the glottis. Death has frequently taken place from these causes. With all this muscular excitement there is seldom any fever. The skin is hot and the thermometer often ranges from 105° to 110° , but the pulse is frequently small and weak, perspiration is generally profuse, the urine is scant and often retained, and always contains an excess of urea. This observation I was led to make in consequence of the excessive muscular contractions that take place, and the relation that urea bears to muscular waste, as demonstrated by Prof. Flint, Jr., in the remarkable pedestrian feats of Weston. Owing to the difficulty of swallowing, the patient suffers from hunger and thirst, thus causing a further reduction in the powers of the system. The bowels are constipated, wakefulness is generally present from the first, and the mind is clear throughout. Death usually takes place from apnea; it may, however, result from exhaustion, and according to some authors, from the spasmodic action attacking the heart.

Duration. This is very variable. The shortest case on record is one observed by Robinson, of Edinburgh, where the patient was immediately seized with tetanus after cutting his finger, and died within fifteen minutes after the attack. Death may take place within a few hours, or as late as the sixth week. The average duration of fatal cases is from three to five days. The period which elapses between the reception of the cause and the beginning of the symptoms, is also very variable. In eighty-one cases collected by Curling they began between the fourth and fourteenth days.

Causes. The most common cause is bodily injury of any kind, from the slightest to the most severe, and of any part of the body, although wounds of the feet and hands are supposed to be more frequently productive of it than those of other regions. Next in frequency to wounds is exposure to cold, damp weather. This is the exciting cause in the great majority of cases of idiopathic tetanus, and it increases the susceptibility in those who have been wounded. According to Hammond, "it was not uncommon during the recent war for the number of cases of tetanus to be very much increased immediately after a sudden change of the weather, from dry and mild to wet and cold." It may also be caused by worms, dentition, abortion, labor and diseases of the womb. Drs. Willan and Hennen report terror as a cause. "In the form occurring in very young children, and known as *trismus nascentium*, it appears to be caused by the neglect of the proper attention to the cut umbilical cord." I have seen it caused by the irritation and inflammation set up by

powdered nutmeg and burned linen to the navel; a treatment much in vogue among the ignorant nurses of this city. Poor diet, bad ventilation, and inattention to cleanliness increase the tendency to tetanus.

Diagnosis. The only affections for which tetanus is likely to be mistaken, are hysteria and strychnia poisoning. Hysteria sometimes simulates it, but may be distinguished by the fact that it is not attended by any real distress, its transient duration, etc. In strychnia poisoning the contractions manifest themselves first in the lower limbs and proceed upwards; in tetanus trismus is an early symptom, and the contractions proceed downward. The absence of epigastric pain, the rapidity of the symptoms and the short duration, all serve to distinguish the toxic from the natural tetanus.

Prognosis. The longer the time that has elapsed between the reception of the cause and the development of tetanus, the greater the probability of recovery. The duration of the disease is also an important item in the prognosis, as cases that last over a week generally recover, although death may take place after the lapse of several weeks. When recovery takes place it is usually about the fourth week of the disease. Mr. Poland (Holmes' Surg.) says, "In the idiopathic variety, where it does not assume an acute and rapid form, the prognosis is, for the most part, favorable, and we may always hope for a chance of recovery. In subacute cases of the traumatic variety, recovery does most generally take place. In acute traumatic cases the prognosis is most unfavorable, and there is scarcely a well-authenticated instance of recovery on record." Notwithstanding these facts, tetanus is one of the most fatal diseases. Dr. O'Beirne mentions two hundred cases without a single recovery. (Dublin Hospital, Rep. Vol. III). To quote Mr. Poland, "Taking all forms together, in a fair average number of cases, the proportion seems to be seven and one-half deaths to one recovery." Arloing and Tripiet conclude "that the thermometer furnishes a very exact guide to the termination of the case. Whilst the rectal temperature remains low (under 100.4°) the prognosis is favorable; and it is to be inferred that there is no structural change in the nerve centres. But when a higher degree is reached (above 103.2°) the prognosis is unfavorable, and there is ground to fear alteration in the substance of nervous centres."

Pathology. The pathology is still involved in great obscurity. Rokitsansky has found, in chronic cases, a proliferation of connective tissue in the spinal cord. Wedl discovered increased redness of a portion of the cord. Curling asserts that serous effusion, with increased vascularity, is generally observed in the spinal membranes, and also a turgid state of the blood vessels above the origin of the spinal nerves. Lockhart Clarke regards the constant lesion as consisting of a granular degeneration of the cells of the cord. Arloing and Tripiet have many times ascertained the existence of a

very marked hyperæmia and of evident nuclear proliferation, and they, as well as Verneuil, contend that the exalted temperature is not due to increased muscular action, but depends solely upon excitation of the spinal cord. Bouchard has verified these results in two instances where the disease ran an acute course. On the other hand the observations of Billroth and other pathologists have thus far given negative results. Whilst there seems to be no doubt that the disorder is dependent upon some spinal lesion, probably of the gray matter, yet the present state of pathology does not warrant any very positive conclusion as to the precise nature of the morbid process. Some authors contend that tetanus, like hydrophobia, is due to blood poisoning. That there is an exalted excitability of the cranial and spinal motor centres (the exciting cause being centric or eccentric) there is no doubt. It may be regarded as an exaltation of the polarity of the cord and medulla; or it may be identical with irritation or inflammation of them.

Treatment. Probably the treatment of no disease involves more uncertainty and contradictory results than this. There is scarcely a sedative or nervous stimulant in the pharmacopœia which has not either been employed or recommended in tetanus. Ether, chloroform, aconite, belladonna, cannabis indica, conium, opium, tobacco, calabar bean, curari, ice, alcohol, counter-irritants, and many other substances, and cases have been reported which have apparently recovered under their administration. Of the surgical means, excision of the injured nerves, and amputation of the limb have been recommended. Lately the bromide of potassa and hydrate of chloral seem to have many advocates. The following analysis by Dr. D. W. Yandell, of the report of Dr. R. O. Cowling on tetanus, may be of some interest as showing the per cent. of success of some of the many plans of treatment:—

Treatment.	No. of Cases.	p. c. Recovery.	Acute.	Chronic.
Calabar bean,	39	39	1	10
Cannabis, India,	25	64	3	3
Chloroform,	35	70	9	1
Ether,	15	60	5	1
Opium,	165	57	22	25
Tobacco,	41	50	6	4
Quinine,	15	73	1	3
Aconite,	14	8	0	1
Stimulants,	33	80	4	6
Mercury,	75	57	0	17
Bleeding,	58	55	9	7
Cold affusion,	11	73	3	2
Ice bags,	9	77	1	..
Amputation,	17	60	4	3
Division of nerves	3	75	1	1
Purgatives,	74	66	13	10
Turpentine,	16	70	6	5

According to this report, Dr. Yandell concludes that cases which occur nine days after injury usually recover; that where the symptoms last fourteen days, recovery is the rule and death the exception, apparently independent of the treatment, and that chloroform, up to the present, has yielded the largest per cent. of cures in acute tetanus. As it is evident that we have increased activity in the motor centres, manifesting

itself externally in abnormal muscular contractions, antagonism of this condition naturally suggests itself as the most feasible therapeutic indication. Accordingly, agents that are supposed to reduce the susceptibility of the reflex-motor centres are most commonly selected. Considerations of this kind suggested to Dr. Harley the probable advantage that might be derived from conia. Its action, according to the observations of Harley, Dyce-Brown and Davidson, is directed to the motor centres; first to the cranial motor centres, producing disturbance of vision (a result of imperfect accommodation from the depression of the function of the ciliary branches of the third pair), heaviness, falling or actual ptosis of the lids. We then have a state of complete relaxation of the whole muscular system supplied by the cranial and spinal nerves, successively in the descending series, from above downwards. Besides the apparent antagonism between conia and tetanus, the following observations would seem to recommend it in the treatment. 1st. It is not a depresser of muscular vigor, but a sedative to action. 2d. It is devoid of influence on the stomach and bowels, consequently it does not interfere with the process of nutrition, which is so essential to recovery. 3d. It has no effect on the cerebrum, yet by relieving muscular spasm it exercises an indirect tranquillizing effect, thereby causing sleep. 4th. It does not possess any local irritant properties. This observation is fully corroborated by clinical experience. The hyperæmic use of conia has fully met expectations up to the present time, yet time alone is the best test of the value of any treatment for this disease.

Hydrate of chloral, which in the last year or so has grown to be quite fashionable in the treatment of more diseases than one, has many advocates. Dr. Liebreich, after making a comparison between the symptoms of strychnine poisoning and tetanus, concludes that it would be a sovereign remedy for the latter. Verneuil, of Paris, in commenting on a series of cases treated by chloral, called attention to an important fact shown by them, which is that chloral has undoubted power in arresting contractions of the exterior muscles, but unfortunately, fails to arrest those of the respiratory, which it is most important should be restored to their normal condition, and it is to this circumstance that the failure of chloral seems to be due. This deficiency, he thinks, can be met by the continuous electric current, which has the positive power of arresting the spasm of the respiratory muscles, thus preventing asphyxia. Calabar bean, according to Dr. Frazer, "acts on the spinal cord by destroying its power of conducting impressions, muscular paralysis results, gradually extending to the respiratory apparatus, producing death by asphyxia; or rapid paralysis of the heart, causing death by syncope. It also causes paralysis of muscular fibres, striped and unstriped." The knowledge obtained by these investigations led to the em-

ployment of the bean in tetanus, and a considerable number of cases have been treated with it. Dr. Greenleaf, U. S. A., reports a total of nineteen cases treated with it, twelve of which recovered and seven died (varieties not stated). Dr. Cowling's collection of thirty-nine cases gives thirty-nine per cent. of recovery, of which one was of the acute traumatic form, with ten deaths from chronic tetanus. This drug has scarcely met expectations in tetanus, and in some cases has been even suspected of doing harm rather than good, and increasing the patient's danger by its paralyzing action. Dr. Ogle, Bauer and others, state that it produces a cramp-like condition in organs that are supplied with involuntary muscles.

It may not be without interest to mention the Chinese treatment. "This mode of treatment has been seen, by English physicians in China and India, to be successful. The patient smokes a mixture of from twenty to twenty-five centigrammes of crude opium and tea or rose leaves, which are worked up with a little molasses. When smoking he must inspire as deeply as possible, and continue the operation until the narcotic effect is noticed. This continues then, as a rule, three or four hours. The smoking is repeated as soon as the tetanic symptoms reappear. In the meantime as much nourishment as possible is given. (MEDICAL AND SURGICAL REPORTER, 1872).

Dr. J. N. Monmonier. The statistics of the Calcutta Hospital give the following results:—

CURED.	RELIEVED.	DIED.
Traum. Idiop.	Traum. Idiop.	Traum. Idiop.
14 20	5 8	24 10
34	13	34

Of the forty-three cases of traumatic tetanus, thirty-eight per cent. recovered; of the thirty eight idiopathic cases, sixty per cent. recovered. The whole number were treated with aloes and Indian hemp, as recommended by Dr. J. Jackson. (Indian Annals, Oct., 1853.) The cases occurred between 1865 and 1869. Toward the latter part of 1870 ten consecutive cases were treated in this hospital with hydrate of chloral, without any other medication. The quantity given was from forty to one hundred grains per diem, according to the severity of the symptoms and the age of the patient. It is rather doubtful whether the drug had any specific influence over the spasms; it put the patient in a deep sleep, and only for a time held them in abeyance. It seems that the hydrate, by keeping back the tetanic energy, rendered it more concentrated, for after the deep slumber the spasms returned with great violence and death speedily followed. It may generally be taken as unjustifiable to trust to the chloral alone in the treatment of severe cases. Simply as a hypnotic it is invaluable. As to Calabar bean, it possesses an influence infinitely short of being a specific, but, nevertheless, it exerts a salutary influence over some cases. There are some cases of pyrexia, accompanied with exposure to extreme heat under a tropical sun,

sudden dizziness, violent throbbing pain in the head, increase of temperature of the body to 150°, where the bean seems to exert a beneficial influence. Its great advantage over drugs of this class in these cases is doubtless due to its action being principally upon the vaso-motor (probably the inhibitory) nerves, and only feebly, if at all, upon the cerebrum. As it is a very dangerous remedy, great discrimination should be used in its employment. We can only be guided by its effects on the system. Just as soon as vomiting, diarrhoea, a small and rapid pulse and clammy perspiration are induced, its use should be at once discontinued. In those cases where the nerves of the spinal cord are principally implicated as the source of the tetanic spasm, the bean doubtless is useful, but if the muscles of deglutition and respiration, as well as the diaphragm, are implicated, it is thought by some, among the number Dr. Macnamara, of India, who has seen many cases, that it should not be administered. In fact, in such cases as the latter, where the medulla oblongata is evidently involved, it is not only useless, but is positively asserted to be injurious.

In India, where tetanus is of very frequent occurrence, of an idiopathic rather than a traumatic nature, the prognosis is guided mainly by the temperature of the body. So long as it keeps below 100°F., the case is generally favorable. The patients of this class are treated mostly with milk, arrow-root and wine, together with a dose of chloral hydrate (grs. xl) at bedtime. On the other hand, should the temperature (especially in the morning) rise to 101° there is great danger, and should there be a sudden elevation from 99° or 100° to 102° the danger is imminent, and few cases recover after it has risen to 103°. In these latter cases, where the temperature keeps under 103°, and the muscles supplied by the spinal nerves are principally implicated, some hope of success may be entertained from the use of calabar bean together with chloral at night. If the muscles affected are directly under the influence of the medulla, and the temperature reaches 103° and upwards, sleep can be induced by the chloral, but no hope exists of recovery from the tetanized condition by the use of any drug. A peculiar feature of the disease is that after death the temperature rises rapidly to 107°.

Dr. Arnold. The great variety of drugs used, and the statistics in regard to the success of the many plans of treatment, prove that we have really no remedy for tetanus; but when we get a case we ring the changes until the patient dies or gets well. The wounds, burns, and other injuries which are credited with producing the disease, seem to me to be but the exciting causes in persons predisposed to disease of the nervous centres. In some there seems to be a strong tendency, and the disease is brought on quickly by a slight injury, while in others it takes a considerable time to set up tetanus, and it may be this latter class that can be aided by proper treatment. I remember

seeing a fatal case produced by abortion, and Rosenthal mentions an instance in which it was brought on by the resolution of pneumonia. The morbid changes pointed out by pathologists may be the results rather than the cause of the spasms, and as there are no constant lesions, and hardly any two observers agree in regard to the appearance of the cord, I think we are justified in becoming somewhat skeptical. Fright and terror will take away all tonicity, but soon the normal condition will be restored, and we cannot suppose that any anatomical lesion was produced. There may be some dynamic change, and I can only compare it to the telegraph wire. We know that the electricity produces some change in the dynamic condition, but the strictest scrutiny cannot discover it. The obscurity of this subject should not surprise us, for our simplest thoughts and emotions cannot be explained. A traumatic case, under my care, was completely subdued by large doses of alcoholic stimulants. Most of the cases seen by me have been those of trismus nascentium. The disease usually appears the 5th or 6th day after birth, and is usually attributed to the dressing of the cord, but I have seen cases in which there was no bad condition of the cord. Bad ventilation may have some influence in its production. I have treated a large number of cases, and do not think I ever saved one.

Dr. Wilkins. Dr. Arnold is too positive in his assertion that it has no morbid anatomy. In all cases of this kind physicians do not improve their opportunities by post-mortem examination. The cases of trismus I have seen resulted from the peculiar dressing. In some cases of traumatic tetanus I have seen good results from conia, grt. ʒ, increased to grt. ij, every hour, gradually lengthening the time as its effects are produced. The increase of the proportion of urea seems to me to be important.

Dr. Arnold. It is no easy matter to open the spinal column, and the difficulties cannot be appreciated by any one who has not tried it. And when we have opened it, what do we find? Not the regular products of inflammation, but changes of shade in color, and microscopic granules, concerning which skilled microscopists and pathologists dispute. The increase of urea can hardly be anything else than the result of the strong muscular work; it is the wear and tear, and offal.

Dr. Irons. One case of trismus that I attended was produced by placing the child in very hot water. I gave potass. brom., gr. j, every 3 hours, increasing or diminishing the time as required. The case recovered.

Dr. Lynch. I would ask Dr. Arnold how long after the use of alcohol before a favorable result was noticed in his case?

Dr. Arnold. The effect of the alcohol was to lengthen the intervals between the spasms, so that the patient got some sleep. The case lasted some weeks. I saw a stevedore who was brought home in tetanic spasms. He

died in thirty minutes after I saw him, I think from suffocation. He had received no injury, and the disease seems to have been produced by hard work and excessive heat. Dr. Troutman. I attended a child, five years old, with tetanus. I ordered Calabar

bean, gr. ij to the 3. By some mistake the family gave the whole at one dose. The spasms were arrested and the child slept half a day. The spasms then increased in violence, but a repetition of the bean had no effect, and death ensued.

EDITORIAL DEPARTMENT.

PERISCOPE.

Laryngeal Phthisis.

Dr. Prosser James read a paper on this topic before the British Medical Association. His object was, by specimens and colored drawings, to correct some prevailing errors respecting this disease, and to show that it is not necessarily so rapidly fatal as commonly asserted. Cases in which the larynx is not affected until after considerable progress has been made in the disease in the lungs are very unfavorable. The author admitted the existence of primary laryngeal phthisis, occurring when the lungs were not perceptibly affected. He had met with such cases. Extreme anæmia of the laryngeal membrane had in many cases been found to precede consumption. It was not, of course, an infallible sign, but it was not to be neglected. A more important symptom was the existence of polypoid excrescence at the posterior commissure, which might resemble closely those seen in syphilis. Such growths might be simple; but in many cases of consumption this was the first symptom, and it was of graver import if there was any cachexia. Inflammation of the arytenoids was common, especially in secondary phthisis. The same condition might occur in catarrh. Hence some caution was to be observed respecting it. Swelling and thickening of the epiglottis was sometimes the most prominent symptom. Local swellings and thickenings of other parts were equally common through a large part of the progress of laryngeal phthisis. The false cords were particularly prone to take on diseased action. These swellings were to be distinguished from those of simple inflammation. The parts lost their transparency, and were the seat of deposit of a greyish or yellow matter. Ulceration was the next stage. In tubercular swellings or excrescences, erosion soon appeared, generally about the little yellow points that were seen. The true vocal cords were also liable to ulceration. Perichondritis with necrosis might occur. Among general symptoms cough and expectoration were slight or absent in pure laryngeal phthisis, but dyspnoea and dysphagia were almost

always present. Most authors declared that laryngeal phthisis was necessarily and rapidly fatal. The author of the paper asserts that this form of consumption might be arrested; and most of the drawings were intended to prove this. The most fatal cases were those in which the laryngeal disease was secondary to pulmonary consumption. The later it appeared in these cases, the more rapid was its course. Among the cases arrested, was one in which the lungs were also affected. The patient was a singer, and when first brought under the author's care had softening at the apex of one lung. On laryngoscopic examination, the epiglottis was seen to be thickened and its edge serrated by ulceration. The arytenoids were swollen. There was an ulcer on the left vocal cord. After several weeks of treatment the disease was completely arrested, and the patient resumed public singing. Each case must be treated according to circumstances. Excessive topical interference was most dangerous. Inhalations and the use of atomized fluids or sprays were the safest and best applications.

The Prevention of Loss of Blood.

The *Medical Times and Gazette* recommends the following plan to diminish the loss of blood in operations:—

An elastic bandage, about two inches and a half in width and from five to ten yards long, is firmly bound round the limb, commencing at the toes or fingers, as the case may be, and is then continued upwards so as to drive the blood before it out of the veins and arteries. When the desired point has been reached, a strong india-rubber band, about half an inch in diameter, is tightly drawn two or three times round the limb, just above the elastic bandage, and fastened by hooks. The bandage is then removed, leaving the tissues blanched and exsanguined. Not a particle of blood is lost during the operation, which is really more bloodless than when performed on the dead subject. After the operation is completed the rubber rope is removed, and the blood then finds its way into the vessels, which are ligatured or twisted according to the taste or inclination of the surgeon. On this plan, which has been carried out at St.

Thomas', Guy's, London, and St. Bartholomew's Hospitals, many operations have now been performed, including excision of the knee and elbow joints, amputations, and the removal of dead bone; and Mr. Wagstaffe has recently amputated through the thigh for gangrene of the foot on this plan, the precaution having been taken to commence the application of the elastic bandage several inches above the mortified part. No ill effects of any kind have hitherto been observed from the use of this contrivance. Although the duration of the operations has varied from a few minutes up to half an hour, and even more, during the whole of which time the circulation has been completely arrested, no evidence has been afforded of the formation of emboli or thrombi in any of the cases. But it is one of the possible evils of the device that the prolonged pressure on the vessels and complete stoppage of circulation may, under certain conditions, lead to the formation of a clot, which, on the re-establishment of circulation, may be carried along the vessels and arrested in some part of their course, giving rise to circumscribed inflammations or even gangrene. There is also considerable danger in applying the bandage over parts which are inflamed and suppurating, especially if decomposition be going on, lest some of the clots which are found in the blood vessels of the affected parts be detached and forced into the blood-current. For such cases it would be well to employ in addition a modification of the plan which has been practiced at Edinburgh for the last two or three years, and which consists in suspending the limb for some minutes before the operation, so that the blood may gravitate downwards. Then the bandage may be applied at the proximal side of the diseased part, thus avoiding all risks of septic poisoning or of embolism.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—The following interesting foreign medical works are announced:—

Hamdy, A. Etude clinique et physiologique sur la propylamine et la triméthylamine. *Paris*, 1873. 4to, 116 pp.

Marchand, E. Etude historique et nosologique sur quelques épidémies et endémies du moyen-âge. *Paris*, 1873. 111 pp.

Pein, Th. Essai sur l'hygiène des champs de bataille. *Paris*, 1873.

Politzer, A. Zehn Wandtafeln zur Anatomie des Gehörorgans. Zum Gebrauche für Vorlesungen und zum Studium der Anatomie des Ohres. Nach den Originalen des

Autors in Lithographie ausgeführt von G. Schlesinger. *Wien*, 1873. *Braumüller*. Fol.
Simon, Oec. Die Localisation der Hautkrankheiten histologisch und klinisch bearbeitet. *Berlin*, 1873.

—The field of Medical periodical literature is so vast that annual or semi-annual abstracts, like our HALF YEARLY COMPENDIUM OF MEDICAL SCIENCE, are becoming more and more popular. One has recently appeared in Italy, entitled, "Annuario delle Scienze Mediche Riassunto delle piu Importanti Pubblicazioni delle Anno. Per i Dottori P. SCHIVARDI e G. PINI." This is a year-book of the most important observations in Medical Science, made during 1872. It contains 460 pages duodecimo. There are also short reviews of the more important medical publications in most European languages. At the end there is a medical history of 1872; a list of prizes offered for treatises in different departments in science and medicine; and short notices of distinguished medical men who have died during the year; the whole finished by a good index of the observations made, and the authors cited in the volume.

—Dr. Ruddock has just brought out the second edition of a neat little volume, "On Consumption and Tuberculosis of the Lungs," a work intended rather for the general public than for the profession.

BOOK NOTICES.

A Practical Treatise on the Diseases of the Ear, including the Anatomy of the Organ. By D. B. ST. JOHN ROOSA, A. M. M. D. 110 Illustrations. 8vo, 500 pp. W. Wood & Co., New York. Price \$5.00.

Continued from No. 873.

Part 2d, Chapter 9th. Anatomy of the Middle Ear, in which is included the membrana tympani. The anatomical description of the membrana tympani, and the illustrations, are from the works of Rüdinger, followed by observations on the Rivinian Foramen, the color of the membrana, and light spot, from Politzer, and of the layers of the membrana tympani, from Henle, whose work was published in 1866; then follows several wood cuts from photographs by Rüdinger, but very much inferior in sharpness. p. 191, Structure of membrana tympani; no mention is made of the mem-

cus? After careful study of the articulation of the ossicula, Rüdinger reasserts (1873)* what he has already published, (Virchow's Archiv, 1860). Both in the articulation between the malleus and incus, the incus and processes lenticularis and stapes, a freely movable meniscus of cartilage is found, thus making a point of two chambers as found at the clavicle; this moon-shaped cartilage has been seen by the writer of this article, under the admirable microscope of Dr. Hunt, of Philadelphia. The mastoid process, cells and blood vessels, are described in three pages, from the works of Kessel and Gruber; indeed, this latter author is quoted twenty-eight times. We have the Eustachian tube well described and illustrated, from the works of Rüdinger, Henle, and the translation in Stricker's Handbook, which latter is freely put under contribution; not one word concerning the original observation of Dr. T. F. Rumbold, of St. Louis.

Chapter 10th. Injuries of Membrana Tympani. In this chapter our author gives an account of Gruber's experiments on the cadaver, which show the resisting power of the membrana tympani; also Dr. Andrew H. Smith's cases of rupture of the membrana by compressed air, in men working in caisson in bridge building; the same results as those arising in the diving bell; also the cases reported by Dr. John Green, of St. Louis; Dr. Magnus has proved that the injury to the ear by condensed air was caused in all such cases by pressure upon the membrana tympani, and when the auditory canal was plugged no unpleasant sensation was felt; p. 228; then follows fracture of the handle of the malleus, cases of, Hyrtle and Dr. Weir, of New York.

Chapter 11th. Acute catarrhal inflammation of the middle ear, with twelve divisions. The only original fact in this chapter, discovered by the author, was that the use of the nasal douche for the treatment of nasopharyngeal catarrh may also produce acute inflammation of the middle ear, but we have employed it ourselves, and with open Eustachian tubes, yet in no instance has it ever produced but temporary inconvenience; it all depends upon the care.

Chapter 12th is devoted to chronic non-suppurative inflammation of the middle

* Report on Otology, By J. Orne Green, from Rüdinger's Beiträge, "Zur Histologie des Mittleren Ohres," München, January, 1873. Boston Medical Surgical Journal.

ear. We have read this carefully in the New York Medical Journal, and in the present work; but we do not find a new idea, except the word "proliferous," and no new ideas of treatment except those given in the works of Gruber, Hinton and others. It is true he gives an account of Dr. Weber's division of the tensor tympani, "the new operation in aural surgery which promises to fill a large, and indeed one of the most important gaps in our (aural) medical resources;" yet no results are given of his own operations, either from hospital or private practice. The author's experience in perforation of the membrana tympani has been chiefly in the manner of Schwartz and Hinton, that is to say, "I made simple paracentesis or openings, into the membrane, and followed them up by treatment of the diseased membrane of the middle ear." p. 343.

In *Chapter 15th* is given a full account of acute suppuration of the middle ear; it is stated that the results of treatment of this disease are very satisfactory; of thirty-two cases reported, fifteen were cured; i.e. the membrana tympani was healed, and the hearing powers fully restored, as tested by the watch and conversation. p. 357. This is much better results than we have ever known to follow any treatment. The author's treatment: "The astringent that I usually use in acute suppuration is sulphate of zinc, which is poured into the ear once or twice a day after syringing. The solution (strength not given) should be previously warmed. Should the suppuration continue unduly, the nitrate of silver may be applied in solution, say from forty to eighty grains to the ounce. This solution is brushed over the drumhead and the edge of the perforation." This is the strength of Schwartz's solutions, and is frequently followed by most severe and distressing symptoms, even when a warm solution of chloride of sodium is employed to neutralize it, in so far as our experience goes. There are five cases reported; the last one is most remarkable; the forty-grain solution was brushed over the canal and the perforated membrana tympani. At the Doctor's next visit, "the morning after this application was made, the discharge (of pus) had completely ceased, and the membrana tympani had healed." p. 362. If this should happen often it would indeed be remarkable.

Chapter 16th, is devoted to the subject of

"chronic suppuration of the middle ear." Concerning this form of disease, our author remarks, "even with the most careful and skillful treatment, we cannot always succeed." p. 371. He still, however, resorts to the same agents. The sulphate of zinc, from one to four grains; nitrate of silver, forty grains to the ounce of water. A short article is given upon the artificial membrana tympani of Toynbee. Our author is not so sanguine concerning this subject as he was a few years ago, and experience will prove that this means of improving the hearing is of little permanent utility, and Yearsley's cotton, which is much more preferable, is much less resorted to at the present day, even in England. In another chapter the author promulgates a friend's formula, founded upon the friend's experience in *one* case, but in the present chapter he devotes a paragraph to that author friend; *believes* galvanic cures of inflammatory ear diseases are still a matter of verbal communication.

The consequences of chronic suppuration of the ear are treated in chapter 17th. On p. 237 of this volume these consequences are tabulated. It is now proposed, at p. 387, to enter into a discussion of their nature and treatment, and first, of aural Polypi, which should be Polypus. In an article published in 1864, our author attempted to show on clinical ground, that aural polypi were analogous in structure to exuberant granulations; this is a very old idea, and not worthy of the times we live in, even if so distinguished a surgeon as "Billroth" propounded the idea in 1855. In structure, aural polypi are fibro-cellular, and the illustrations given in Dr. Roosa's work have none of these true structures; they are simply the surface of polypi with the epithelium and round cells. "Polypus of the ear, by Clark," or still better shown on figures 15, 16, and 17, p. 150, 151, and 152. "Diseases and injuries of the ear, by Dalby." Microscopic appearances are described as perfectly formed fibrous tissue, constituting the chief portion of the centre of the polypus; these last appearances are represented in the sketch by S. Whippleman, and agree with our observations. Then we have Mastoid disease, Periostitis and its treatment, with five illustrative cases, but nothing new; Caries and suppuration, with an incomplete historical sketch. In a table are 40 cases of cerebral abscess, which are not particularly valuable, as most of

them lack the link connecting the intercranial with the aural disease, but that is not the fault of the *original* reporter in every case.

p. 167. Tinnitus aurium. The remarks on tinnitus aurium, scattered here and there in the volume, in connection with the affections in which this symptom occurs, are meagre and unsatisfactory, and could all be comprised in one page.

Chapter 18th gives a short account of the anatomy of the internal ear, compiled chiefly from "Boettcher, Gottstein, Gruber, Henle, Hyrtle," and from Waldeyer, the latter from Stricker's Handbook, New York, 1871.

Chapter 19th. "Diseases of the internal ear." From the analysis of a large number of cases of cerebral disease. Dr. Hughlings Jackson expresses the opinion that deafness never results in any way, from any kind of disease in any part of either cerebral hemisphere. In relation to disease of the labyrinth, Dr. Roosa ignores the valuable observations and analyses since the time of the late Dr. P. Ménière, and touches the subject too slightly for a practical treatise.

p. 487. "Nervous deafness. Unfortunately, although we have had an epidemic of cerebro-spinal meningitis in New York, I have as yet had no opportunities of studying this disease, except from its clinical history, when the victims were brought to me deaf or blind." Not very competent, then, to give an opinion. In regard to electro-diagnosis there is a good deal of literature which the author's friend might or should have weighed, and the subject deserves at least a clear exposition; here, also, the author does not figure as an originator, or experimenter.

Part 4. Deaf Mutism and hearing trumpets; is comprised in eight pages. The chromo-lithographs, No. 8, concludes the volume; they are much inferior to those of Politzer, and have such a strong resemblance to a shell, colored not from nature, but by art, that we fear they will be of little use as guides in diagnosis.

The publishers have done their work well, and have produced a very handsome book; good paper and clear type; of its literary character it is unequal, most of it reading like a translation; and after a careful analysis we find but little that is absolutely new, or had not been published before; we therefore make the inquiry why such a book was published at this time?;

MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, NOV. 29, 1873.

J. W. BUTLER, M. D., D. G. BRINTON, M. D., Editors.

Medical Societies and Clinical Reports, Notes and Observations, Foreign and Domestic Correspondence, News, etc., etc., of general medical interest, are respectfully solicited.

Articles of special importance, such especially as require original experimental research, analysis, or observation, will be liberally paid for.

To insure publication, articles must be practical, brief as possible to do justice to the subject, and carefully prepared, so as to require little revision.

Subscribers are requested to forward to us copies of newspapers containing reports of Medical Society meetings, or other items of special medical interest.

We particularly value the practical experience of country practitioners, many of whom possess a fund of information that rightfully belongs to the profession.

The Proprietor and Editors disclaim all responsibility for statements made over the names of correspondents.

AN OBSCURE PHENOMENON IN PSYCHOLOGY.

A few months ago a writer in this journal gave us a collection of facts illustrating the existence of what he called, a "mental atmosphere." (See MEDICAL AND SURGICAL REPORTER, Vol. xxix, p. 88). Such facts are of much more psychological importance than they are usually deemed. Indeed, most scientific writers fear to speak of them, lest censure for too great credulity be their reward.

This was long the case with Mesmerism, until it was investigated by Dr. CARPENTER, and then it proved a valuable means of furthering the study of mental phenomena, and led to the discovery, or at least the correct understanding of the automatic cerebral action. This interesting function of the mind is closely connected with those more recondite powers by which the brain, or rather the action of the brain, its rhythmical workings, become in some yet unknown manner in accord with workings of other brains, so as to lead to the rise of the same idea in two minds. If, with FECHNER, (still the best authority on all psycho-physical questions) we regard thought-action as

the manifestation of a series of vibrations subject to mathematical laws akin to those which govern the senses of sight and hearing, then the explanation which suggests itself in these instances of persons *en rapport*, or *clairvoyant*, is that the thought vibrations are detected by the consciousness as isochronous with those in another mind, somewhat as a musical ear will detect concord between the pitch of two sounds, when ordinary persons cannot.

But we care less just now to substantiate this theory, than to illustrate the facts for which we are seeking explanations. Two remarkable and well attested instances have been laid before the profession in the last few months, in the pages of the *Chicago Medical Journal*, in the numbers for June and September.

The first is related by Dr. GEORGE W. KITTELL, of Shabbona, Ill. A young lady cut her hand severely with a pane of glass, imbedding a number of small fragments in the wound. It was not attended to properly at first, and in a few months "the pieces of glass actually removed, from the crown of her head to the soles of her feet, were numbered by thousands." This looks very much like one of those aggravated cases of hysterical dementia which, in their love of self-inflicted suffering, have always been the puzzle of the wise and the wonder of the vulgar. In this wretched condition she survived from 1865 to December 1872, when death from exhaustion supervened.

The part of Dr. KITTELL's description we wish to call attention to is the following:—

"One curious phase in her history should be noticed. I refer to clairvoyance.

"In this case it was not produced by mesmerism, but by chloroform, and she became more and more susceptible to its influence. In the later stages of the case this state came on occasionally from over excitement.

"Before the accident which introduced the case she was given chloroform for the purpose of having a tooth extracted. The doctor who administered it had not always kept that moral rectitude, in some particu-

lars, which becometh a physician. Shortly after the inhalation commenced she began to upbraid him for his conduct. The doctor was frightened, and accused a man, the only one beside himself who knew the circumstance, of telling. The man protested that he was innocent, for he really was. When Miss Low returned to consciousness she knew nothing of what she had said, or of the occurrence she had related.

"My first knowledge of this effect of chloroform on her came in this way: After removing some glass one day, and while she was still under the influence of the anæsthetic, I was called out for a private interview. The weather being pleasant, we stepped into the orchard and sat down under a tree. When I returned she remarked, 'you thought yourselves very cute when you went into the orchard to talk; but I heard it all.' I then asked her to tell what she heard, and she related our conversation correctly. She had not left the bed in my absence, and could not see the orchard, as it was on the other side of the house, neither had she been told that I left the house. In fact, she was apparently unconscious the whole time, and when she had fully recovered from the influence of the chloroform she knew nothing of what had been done or said. I had known her to say strange things while anæsthetized, but till now had not understood it.

"Sometimes, after having taken chloroform, she would rise in her sleep and go miles, in her night clothes, to find articles that had been lost. She never had any knowledge of these nocturnal expeditions in her waking state, except the proof afforded by the presence of missing articles, and the condition of the bed in the morning.

"Her clairvoyant state was another existence to her. When in this state she would tell anything that had transpired at other times, while in the same condition. I have given her chloroform in order to enable her to find lost articles, which she could always do. Some little thefts, and sometimes bigger ones, were made known in the same way.

"When very sick she was often delirious, sometimes for hours, which led many people to suppose she was insane, and some said she was possessed of the devil. It was from this fact that the horse thieves escaped punishment; many would take oath in court against her sanity. She was the principal

witness, and popular prejudice, backed by some physicians, for no laudable purpose, carried the day.

"To relate all that she said and did, while clairvoyant, would make a long and interesting chapter. The most interesting occurrences of this kind must be omitted because of their length. If any doubt is entertained as to the truth of these statements, any further proof desired will be gladly furnished by the author."

An example, not dissimilar in kind, but furnished by a young man in perfect health, is given in the number for September, by Dr. HENRY M. LYMAN, Professor of Chemistry in Rush Medical College, Chicago. The person was Mr. Brown, known as the "Mind Reader," twenty-one years of age, sound in body and mind. He exhibited his peculiar power by finding, blindfolded, any object which Dr. LYMAN secreted in an adjoining room. To do this, he was obliged to be in physical contact with the person who had secreted it. He did not pass into a condition of trance, but claimed to be guided by a sort of subjective appearance of light. His power varied with the temperature and with his own feelings. It depended also on a distinct knowledge of the whereabouts of the article, on the part of the person who conducted him.

Though neither of these examples present novel features, they are valuable because carefully established by competent observers. The deductions from them clearly include the position that the function of cerebration can be stimulated and directed by other means than those ordinarily considered exhaustive. The thought-vibrations are not bounded by the superficies of the body, nor by the peripheral extremities of the nerves, but are continued beyond in space, doubtless under some law of decreasing intensity, until, perhaps, they are metamorphosed into some other form of motion, or else become extinguished.

Certain brains, usually but not always in abnormal conditions, are impressed by these vibrations with sufficient force to cause the

cerebral action to rise to the level of conscious thought, and hence this singular power of "reading the thoughts of others." The physiological laws which are here involved are those especially which explain the phenomenon of consciousness; and as these are of very extended bearing in other branches of psychology, we shall defer entering upon them until some future occasion.

CORRESPONDENCE.

Capillary Bronchitis.

EDS. MED. AND SURG. REPORTER:—

There is an article in the REPORTER of September 6, by H. R. Noel, M.D., which I have read with much interest. I have had some cases of capillary bronchitis which I treated in the manner recommended by Dr. Noel. All the patients in whom there was much prostration died. There was such a copious secretion of mucus the little patients were unable to expectorate it and they died from suffocation. After losing two or three cases in this manner, I had another, a child about six months old. I treated him as I had the others, and expected that he must die. After a while the emetics failed to nauseate him, his lungs were filling up fast, and he was very much prostrated. To produce emesis I placed some cayenne pepper in a spoon and added a little water and gave it to him. As soon as he swallowed it he vomited freely, and was perfectly relieved. It was evident that the relief was only temporary, that the lungs would fill up again. Fearing that I should not be able to produce vomiting again, and believing that the difficulty arose from torpidity, and that that arose from prostration, I determined to give quinine. I gave him an eighth of a grain in solution, hoping that this would arouse the sensibility so that the expectorants would act more efficiently, and strengthen the patient so that he would be better able to bear the operation of the medicine. I waited four hours, during which time the lungs remained free from mucus, and had breathed naturally. I then gave another dose of quinine, and directed him to have an eighth of a grain once in four hours, leaving also an expectorant to be given if necessary. The next day he was better and had not needed the expectorant. I continued the quinine and the child soon recovered.

After taking the pepper to cause him to vomit he took nothing but quinine. Being satisfied that the cure was effected by the quinine, I have used it in all cases where there was danger of suffocation from mucus attended with prostration.

Previous to this time, after the patient had passed the active stage of the disease, I depended upon the decoction of squills, san-

guinaria, senega or pepper, or their tinctures, either separate or combined, and brandy, to effect a cure. But in all of these cases there was a copious secretion of mucus, but where I have used the quinine, there has been no need of any expectorant, there being no danger from the mucus.

Wallingford, Vt. G. M. NOBLE, M.D.

NEWS AND MISCELLANY.

Corrigenda.

Current vol., p. 311, line 17, for *large* read *larger*. Page 312, case 3. Mrs. — experienced dimness of vision after 15 grs. were taken.

Jefferson Medical College.

At a meeting of the Anatomical Class of the Jefferson Medical College, Robert M. Hays being called to the chair, and E. R. Lewis appointed Secretary, the following preamble and resolution were unanimously adopted:—

Whereas, The Anatomical Class of Dr. Wm. H. Pancoast, and the students generally, having heard of the great and irreparable loss which he has just sustained in the death of his beloved wife, who was personally known to many of us, and highly esteemed by all, therefore,

Resolved, That we hereby tender to him the expression of deep sorrow which we feel on this occasion.

We wish also to assure our valued teacher, who has so thoroughly won the friendship and affection of this class, that we sincerely sympathize with him in his bereavement, and offer to him our sincere condolence.

JOHN V. SHOEMAKER, *Chairman*,
A. P. BRUBAKER,
C. E. SAYLES,
ROBT. MCCONAUGHY,
D. RENCH MILLER,

Committee.

Philadelphia, Nov. 14, 1873.

Snakes in India.

Dr. R. Druitt writes from India that in Madras, in 1870-71, the number of human lives said to have been destroyed by beasts of prey and poisonous snakes was 2225, and the number of cattle 5314. The rewards paid for killing tigers, etc., amounted to £2511. Only £2 14s. was spent in rewarding the destruction of snakes. But an official return for the year from April 1, 1872, to March 31, 1873, shows a very different state of things. In March, 1872, seventy-four snakes were destroyed in the whole Presidency, and the reward of two annas, or 3d., for each poisonous snake amounted to 18s. 6d. But month by month the serpenticidal zeal of the population was more and more aroused, till in March, 1873, the number of snakes

destroyed was 425,057, and the rewards not less than £5313 4s. 1½d. Taking the year as a whole, the number of snakes destroyed in the Presidency was more than 1,250,000, and the money paid in rewards was £15,728 16s. 9d., which numbers would have been trebled had every part of the Presidency been equally zealous. The Madras Government seems to have repented of its liberality, and to have thought that even snake-killing might be too dear; therefore, by an order dated May 28, 1873, they have restricted the reward to cobras only, and have fixed it at one anna, or 1½d. per cobra. It was alleged that some of the natives used to breed cobras on purpose to get the rewards; but considering the immense quantity of land which seems not to be cultivatable profitably for human food, and which is covered with prickly pear and other wild plants, there really seems to be no limit to the number of snakes which might be captured. Very few cases of snake-bite in India are seen by European or medical authorities. The poison is too rapid. "We get," adds the *London Medical Record*, from which the above details are taken, "an incidental glimpse occasionally, from indirect sources, of the details. For instance, in the Report of the Society for the Propagation of the Gospel, a poor Christian thus describes the death of his daughter: 'Three weeks after her marriage, in a field in the wilderness, a snake bit her. Her husband dragged her toward home as far as he could. Her legs were cut by the stones, and bleeding. When he could carry her no longer, he laid her near a thicket, and ran for help, but the ants had begun to eat her face before he could return.' It must in candor be said that some authorities consider the accounts of the numbers of men and animals destroyed by snakes very much exaggerated, and affirm that many men and women and others who are murdered, are said to have died from snake-bite. On this point we can offer no opinion. Certain it is that nothing is more rare than to hear of Europeans bitten."

—A new use for patent pills has been discovered. A farmer living in a Kansas village was abruptly visited by robbers, one night, not long ago, and having a gun and powder, but no shot, loaded with a box of fever pills, and blazed away. The result was as satisfactory as though the rascals had swallowed the pills. One of them was killed outright, and another dangerously wounded.

—Sir Henry Thompson, the surgeon, makes a larger income than any other member of his profession in England. In his youth Sir Henry was a linen draper, but now, at the age of fifty-three, he is at the head of his profession.

—In Philadelphia there are 127,746 families living in 112,386 houses, with 6.01 persons in each house; and in New York there are 185,780 families living in 64,044 houses, with 14½ persons in each house.

—A Parisian journal, which would be witty, relates this incident:—

A doctor lives in the faubourg St. Honoré, over a poulterer's shop. Their signboards, perhaps, do not clash. The first announces the surgeon is "Visible at all hours," and the second, "Killing every day on the premises."

MARRIAGES.

ALLEN—BROOKE.—By Rev. E. T. McMahon, Oct. 16, in the Pre-bbyterian Church, Ellsworth, Mahoning Co., Ohio, Mr. Wm. H. Allen, and Miss Ella E., daughter of Dr. G. W. Brooke.

ASHMEAD—FLEMING.—On the 5th inst., at the residence of the bride's parents, by the Rev. Matthew Newkirk, Dr. Albert S. Ashmead and Florence M., daughter of David Fleming, Esq., all of this city.

AYRES—MCLEAN.—In Cincinnati, Oct. 23d, by the Rev. D. H. Moore, Dr. S. C. Ayres and Miss Louise McLean, daughter of S. B. W. McLean.

BOYLAND—MACTAVISH.—At the American Consulate, in Stuttgart, Wurtemberg, Dr. G. Haisted Boyland, of Cincinnati, author of "Six Months Under the Red Cross," and Mrs. Ellen G. Mactavish, daughter of Robert Gilmor, Esq., of Baltimore. The ceremony was solemnized by the Rev. Mr. Newman, of England.

GRUBER—FALL.—Oct. 23d, at the residence of the bride's parents, by the Rev. J. F. Marlay, Milton L. Gruber, Esq., of Chicago, and Miss Lizzie F., daughter of Dr. J. C. Fall, of Xenia, Ohio.

HUNT—CAREY.—By Rev. John M. Barnett, at the residence of Henry White Esq., Uniontown, Pa., Oct. 15th, Mr. A. C. Hunt, of Cleveland, Ohio, and Miss Victorene L., daughter of John Carey, M.D.

MILLS—PEALE.—On the 6th inst., at the residence of the bride's mother, by Rev. J. S. J. McConnell, of Easton, Pa., Charles K. Mills, M.D., and Clara E. Peale, both of this city.

MUNDE—HUGHES.—In Trinity Chapel, Southport, Conn., Nov. 11th, by Rev. E. S. Wells, assisted by Rev. Andrew Walton, Paul Munde, M.D., of New York, and Eleanor Claire, daughter of the late E. B. M. Hughes, of New Haven.

NORMAN—MCCARTY.—At the residence of James McCarty, Xenia, Ohio, Oct. 23, by the Rev. W. E. Parsons, Frank Norman M.D., of Columbus, O., and Miss Etta McCarty.

RENNINGER—RUTHERFORD.—Near Harrisburg, Pa., on Oct. 23d, by the Rev. W. B. Noble, Abraham C. Renninger, M.D., and Sarah A. Rutherford.

WALKER—BOYD.—Oct. 29th, at the First Presbyterian Church, by the Rev. T. W. Drew, Dr. C. W. Walker, of Mecklenburg county, and Mary A. Boyd, of Chase City, Virginia.

DEATHS.

BLACKBURN.—In Brownville, Nebraska, on Oct. 21, 1-72, Mrs. Hattie A. Blackburn wife of Mr. W. D. Blackburn, and daughter of D. J. and Mrs. E. McPherson.

HOLMES.—On the 12th inst., at the residence of W. S. Whiteley, Esq., Baltimore, Anna Isabella, eldest daughter of Dr. John and the late Mary Anna Margaretta Holmes, of this city.

PANCOAST.—In this city, on the morning of the 13th inst., Gertrude L., wife of Dr. William H. Pancost.

WHITE.—In New York, Nov. 11th, 1873, Mary Isabelle, second daughter of Dr. Francis V. and Annie H. White, in the 7th year of her age.